



Dairy producers are environmentally responsible. Between 1990 and 2003, GHG emissions from dairy cows in Canada have dropped 12%, whereas the Kyoto target was 6%. While we have done well, we can do more. More efficient feed and using waste to make renewable energy on our farms are concrete ways to continue to be part of the solution!

Reducing Emissions Globally

DFC presented mitigation options on the farm during a one-day workshop at the World Dairy Summit in Shanghai. Different farm systems emit different quantities of gas from various sources. Logically, implementation of beneficial practices also varies. Emissions of methane coming mostly from ruminant's digestion and manure are more predictable. Canada, France and New Zealand are leaders in researching options to mitigate greenhouse gas emissions on farms.



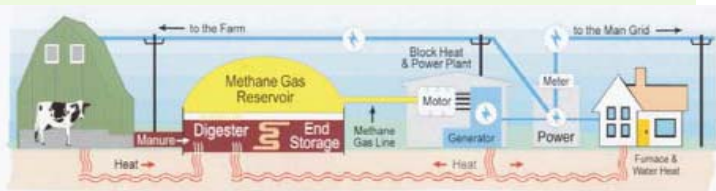
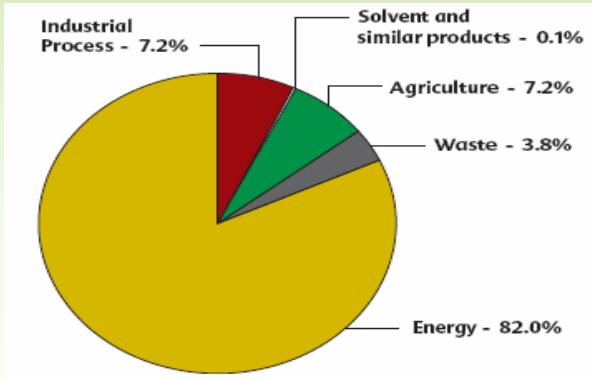
Greenhouse Gas: Dairy Cows Not that Guilty!

The UN Food and Agriculture Organization (FAO) says that cattle are a bigger source of greenhouse gas (GHG) emissions than transportation, contributing 18% of globally GHG emissions. In Canada, the situation is reversed. The transportation sector creates nearly six times more GHG emissions than cattle! The Canadian dairy production already exceeds the Kyoto commitments: between 1990 and 2003, GHG emissions from dairy cows have dropped 12%, whereas the Kyoto target was 6%. Through productivity gains, fewer cows are needed to produce enough milk to meet the needs of Canadians than before. Moreover, dairy farming reduces GHG emissions by about 1% per year by adopting more efficient production and feeding methods.

On-farm Anaerobic Digestion Systems

Preliminary results of a three-year project evaluating the performance of anaerobic digesters on medium-sized dairy farms look promising. Fepro Farms, a 200 tie-stall dairy cow operation in Cobden, Ontario, is one of the farms involved in the project. It produces an average of 700 kWh/day. That's enough electricity to power 30 homes! The two brothers on the farm use the electricity generated to heat two single-family homes, a pool and the barn, and sell the rest to the grid for \$0.11 per kWh.

Anaerobic digestion also has environmental benefits: the electricity produced reduces methane emissions from the farm by about 66%, reduces odours by 93% and reduces pathogens in manure by 75 to 98%. More digesters were built recently. Making use of co-substrates like corn silage to enhance biogas production, these digesters will provide additional data for various options and farm sizes.



Curbing GHG, an Economically-Sound Decision?

In 2006, DFC asked researchers to look at the economics of adopting GHG mitigation practices studied during our demonstration projects in the last four years. Laval University is collaborating with the AAFC-Lennoxville Research Centre to look whether it pays to be green. This project is expected to yield answers in the spring of 2007.